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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,131	03/29/2004	Dominique Lo Hine Tong	PF030059	2174
24498	7590	05/03/2005		
THOMSON LICENSING INC. PATENT OPERATIONS PO BOX 5312 PRINCETON, NJ 08543-5312			EXAMINER HAM, SEUNGSOOK	
			ART UNIT 2817	PAPER NUMBER

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/812,131	TONG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Seungsook Ham	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/26/04, 3/29/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities:

Page 2, lines 15-27 should be inserted after "Description of the Drawings", line 12.

Appropriate correction is required.

### ***Claim Objections***

Claim 6 is objected to because of the following informalities: "fomring" should be corrected to --forming--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, line 20, "metal features are placed is crenellated" cannot be understood as to what is meant by "crenellated".

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Reindel (US '870).

Reindel (figs. 1-3) discloses a floating microwave filter comprising: filtering elements 26 sandwiched between two foam half-bars 16A, 16B (col. 3, lines 33-37) that are placed inside a waveguide 12; the waveguide is an internally hollowed-out block of foam having a metallized outer surface 12, and the foam waveguide has a rectangular cross section and an internal cavity of rectangular cross section. It should be noted that "the filtering elements are metal features **etched** in the surface of one of the two foam half-bars" is a step method in a device claim, thus, it cannot be given any patentable weight.

Regarding claim 5 (insofar as understood), the surface of the foam bar 16B on which the metal features 26 are placed is crenellated (e.g., notched, the bend portions 26B).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harel et al. ("Foam technology for Integration of millimeter-wave 3D functions") in view of Reindel (Us '870).

Harel et al. (fig. 2) discloses a floating microwave filter comprising: a filter elements "E-plane" disposed on a foam half-bar "foam bar", and the waveguide is an internally hollowed-out block of foam having a metallized outer surface.

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Harel et al. does not show providing two foam half-bars. Reindel (figs. 1-3) discloses a similar floating waveguide filter having filtering elements sandwiched between two foam half-bars. It would have been obvious to one of ordinary skill in the art provide an additional foam bar to sandwich the filtering elements in the device of Harel et al. for mounting the filter elements as taught by Reindel (col. 3, lines 35-37).

Regarding claim 5, it would have been obvious to one of ordinary skill in the art to provide a form bar with a crenellation (e.g., notched) in the modified device of Harel et al. since such design technique is well known as shown by Reindel (fig. 3).

Regarding claims 6 and 7, forming the metal features constituting the filtering elements by spraying or brushing on a metal paint onto the surface of one of the foam half-bars are considered as an obvious design modification since such technique is well known in the art.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reindel (US '870) in view of Carlson et al. (US '755).

Reindel does not show the internal cavity or the foam waveguide having a circular cross section. However, waveguide having different cross sectional shape is well known in the art. Carlson et al. (fig. 2) discloses a filter element disposed in a waveguide having an internal cavity of circular cross section. It would have been obvious to one of ordinary skill in the art to provide the internal cavity of the foam waveguide having a circular cross section in the device of Reindel to obtain a desire waveguide mode and such design technique is well known in the art as shown by Carlson et al.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reindel (US '870).

Forming the metal features constituting the filtering elements by spraying or brushing on a metal paint onto the surface of one of the foam half-bars are considered as an obvious design modification since such technique is well known in the art.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harel et al. ("Foam technology for Integration of millimeter-wave 3D functions") in view of Reindel (Us '870) as applied to claim 1 above, and further in view of Carlson et al. (US '755).

The modified device of Reindel does not show the internal cavity or the foam waveguide having a circular cross section. However, waveguide having different cross sectional shape is well known in the art. Carlson et al. (fig. 2) discloses a filter element disposed in a waveguide having an internal cavity of circular cross section. It would have been obvious to one of ordinary skill in the art to provide the internal cavity of the foam waveguide having a circular cross section in the modified device of Reindel to obtain a desire waveguide mode and such design technique is well known in the art as shown by Carlson et al.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lovick, Jr. (fig. 20 discloses a rectangular waveguide having an internal cavity of cross circular cross section;

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Estes et al. discloses a filter elements formed on a dielectric substrate by spraying or brushing (col. 3, lines 14-22); and

Konishi et al. (fig. 3) discloses a filter element disposed on a waveguide.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Seungsook Ham  
Primary Examiner  
Art Unit 2817

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